



SAW

SENSE



**TREATISE
ON GOOD
SAWS**

ATKINS SILVER STEEL SAWS

ATKINS STATEMENT OF QUALITY

GENUINE ATKINS SILVER STEEL SAWS are manufactured with the utmost care to insure quality of material and workmanship. **Every** saw is thoroughly inspected before shipment. Any saw proving unsatisfactory as to either workmanship or material should be returned **DIRECT TO OUR FACTORY** at Indianapolis for inspection and adjustment of complaint. Dealers are not authorized to adjust complaints or make replacements.



IMPORTANT—Do not hesitate to ask your dealer to take your order for any saws shown in this book. Should he not have the particular **ATKINS SILVER STEEL SAWS** you want he can easily secure them from his wholesaler, whether he is a duly authorized **ATKINS** agent or not.



*If you have any difficulty in getting any **SILVER STEEL** saw that you wish, as suggested above, let us know and we will personally see that you are taken care of promptly.*



HOW TO KNOW THEM — Every genuine **ATKINS SILVER STEEL SAW** is plainly marked with the “**AAA**” trade mark, and etched with the signature

E. C. ATKINS AND COMPANY

No other is genuine.

THE SAW

THE MOST IMPORTANT TOOL IN THE CARPENTER'S KIT

ATKINS SILVER STEEL SAWS have marked an epoch in the history of the saw. They are not only made of the very finest material, but are constructed on exclusive scientific principles instantly appreciated by the lover of fine tools.

SILVER STEEL

SILVER STEEL is the invention of Mr. E. C. Atkins, the founder of E. C. ATKINS AND COMPANY. He was the first saw manufacturer to realize that high-class mechanics would appreciate value and quality. SILVER STEEL was born of this idea.

It is manufactured under a special formula for E. C. ATKINS AND COMPANY. Nothing but virgin ore is used, combined with the finest ingredients. The result is a steel equal to the finest RAZOR STEEL.

No saw is a genuine SILVER STEEL SAW unless the name SILVER STEEL is plainly etched on the blade.

THE TEMPER

All ATKINS SILVER STEEL SAWS are tempered by gas. The degree of temper to be given to each blade is prescribed by the metallurgist and regulated in the tempering room by mechanical devices which insure absolute uniformity. They are not dependent upon the judgment of any one man, nor subjected to the variation which might occur by the old-fashioned "rule of the thumb." Treat-

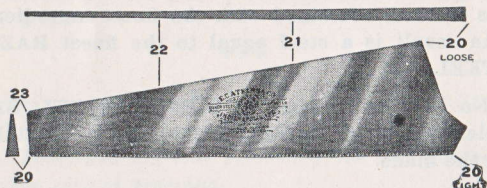
ment renders the blade hard and tough without being brittle. An Atkins saw cuts and wears evenly throughout the entire blade. This is one of the reasons why a SILVER STEEL SAW will retain its cutting edge longer than any other. This also enables you to file the saw easier, and to keep each tooth uniform.

THE SMITHING

The smithing of a hand saw is the process which enables the blade to run true. It is not apparent to the naked eye, and for this reason is omitted from many saws. In the Atkins plant, the process of smithing is deemed one of the most important features in the manufacture of saws, and we employ only the most skilled and experienced men for this work.

THE GRINDING

Exaggerated for the Sake of Clearness



The figures indicate gauges, the higher the figure, the thinner the saw

Taper grinding consists in passing each blade (according to a templet) between rapidly revolving grindstones so that the blade actually tapers from the tooth edge, which is the thickest part, **THROUGHOUT** the entire blade toward the point on the back. The blade, therefore, resembles in shape an inverted wedge, and the kerf cut by the teeth is sufficiently wide to permit the balance of

the blade to drop naturally into the cut, without an excessive set and with no possibility of binding or buckling.

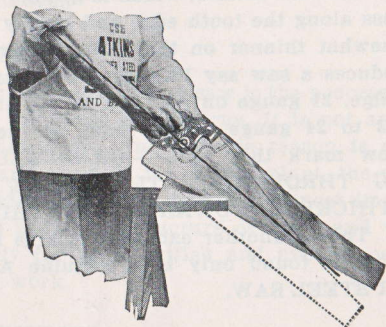
You should realize the distinction between ATKINS TAPER GRINDING and the so-called thin back saw of other makes, which is ground an even thickness along the tooth edge and simply dubbed off somewhat thinner on the back. Taper grinding produces a saw say 19 gauge along its entire tooth edge, 21 gauge on its back at the butt, and from 23 to 24 gauge on the back at the point, and—now mark this well—GRADUALLY TAPERING THROUGHOUT THE BLADE FROM THE THICKEST TOWARD THE THINNEST POINT. This is another exclusive Atkins feature, and is to be found only in a genuine ATKINS SILVER STEEL SAW.

THE HANDLE

We make two styles of handles—the old style straight across shape and the ATKINS IMPROVED PERFECTION PATTERN. The distinction between the old style and Perfection will be apparent upon noting the illustration on page 4, which shows the Perfection Handle on a saw, and a skeleton outline of how the same saw would hang with an old style handle.

The dotted lines represent the position in which the saw blade is naturally operated through the use of the old style straight across handle. The position of the handle throws the blade downward so that the point of greatest energy—namely, in a straight line from the elbow through the saw arm and wrist—is directed against the BACK of the saw. This forces the operator to exert a downward pressure with his wrist in order to secure a proper cutting force.

Now, note the Perfection Handle, which is the one shown most prominently in the picture. Apply the straight line test to this saw and you will find that the point of greatest energy is directed immediately upon the CUTTING TEETH.



There is no strain on the wrist and every ounce of pressure counts. In other words, it is the same principle as if you attempted to push a heavy object from an elevation ABOVE YOUR HEAD or on a line with your waist. The Perfection Handle comes on Saws Nos. 53, 65, 82, 400 and 401.

IMPORTANT—Do not overlook the fact, however, that we make the old style straight across handles when preferred, and furnish same regularly on certain numbers of hand saws.

THE FINISH

ATKINS SILVER STEEL SAWS may be easily distinguished by the beauty and fineness of their polish. The famous Damaskeen and Mirror finishes are used only on Atkins saws. Each Atkins saw is packed in a moisture-proof bag, and is marked on the blade for identification.

HOW TO TEST AN ATKINS SAW

Hold the saw at arm's length, bending the blade slightly to bring the points of the teeth into view along the entire breast of the blade. The points should all show the same length. The breast should be slightly crowning about $\frac{1}{8}$ -inch in 30 inches. Next hold the saw in such a manner that you can look from the back along the flat side of the blade in order to examine the set. This should be uniform on both sides to perform accurate and smooth work. The setting should not extend more than one-half the length of the tooth, and under no circumstances should it be carried beyond the base of the tooth into the blade.

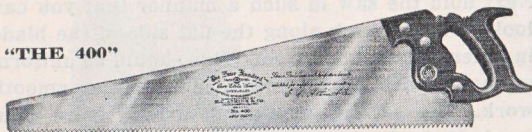
The handle must be in proportion, comfortable to the grasp and so fitted to the saw as to hang properly to bring the lines of force exerted in sawing at the proper point. It is very essential that the material used in making these handles is thoroughly seasoned. The wood used in Atkins handles is air dried for three years. This prevents warping or twisting, and insures tight screws that will always hold the blade properly. The handle must be slit true, for the blade and the slit must be only wide enough to admit the blade under pressure.

What you most require as a skilled mechanic is a saw that will enable you to do good work with the greatest ease. An additional cost of fifty cents or a dollar for an ATKINS SILVER STEEL SAW in preference to some other cheaper saw will prove a paying investment for you always.

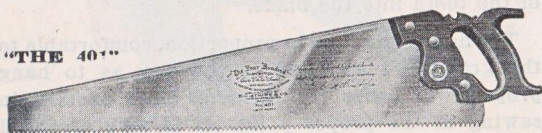
ATKINS HAND, RIP AND PANEL SAWS

SILVER STEEL

TRADE **"The Four Hundred"** MARK



SKIEW BACK—SHIP POINT



STRAIGHT BACK—SHIP POINT

This is the Atkins hand saw masterpiece, and the Elite of all saws. "The Four Hundred" is made for master carpenters. It embodies every needed quality to make a fine saw "The Finest on Earth." Here are the points of superiority that make "The Four Hundred" the unchallenged leader:

- 1—Genuine SILVER STEEL blade, for smooth cutting and durability.
- 2—Mirror finish, for beauty and preservation.
- 3—Thoroughly tempered to insure uniform toughness.
- 4—Taper ground 5 gauges, for clearance.
- 5—Perfection pattern handle to prevent wrist strain, of solid Rosewood.
- 6—Nickel plated screws and medallion.

No. 400 is made skew back only. No. 401 is the identical saw in the straight back pattern. Ship point saws made in 26-inch length only.

Regular pattern lengths, inches-----24, 26

ATKINS SILVER STEEL SAWS

All saws shown on this page are made of genuine SILVER STEEL. They are uniformly tempered to insure fast, accurate cutting. They are ground by Atkins exclusive "Taper Grinding" process, which gradually tapers the blade from the cutting edge to the back and the point to the heel on the back, giving the saw a two-way taper. This prevents binding. Blades are hand smithed and given the Atkins Damaskeen finish. Handles are of well-seasoned applewood, evenly lacquered and highly polished, and fastened to the blade with nicked screws and a medallion. Ship point styles are illustrated, but each saw is also available in the regular pattern.



No. 51—SHIP POINT

Our leading straight-across handle pattern saw, and a favorite with scores of experienced carpenters. Made skew back, ribbon edge. A truly fine hand saw. Ship point pattern made in 26-inch length only. Regular pattern lengths, inches.....20, 22, 24, 26



No. 53—SHIP POINT

Here is the most popular hand saw on the market for general carpentry work. The Perfection pattern (non-wrist strain) handle is attractively carved. Skew back. This saw is in constant demand by the most critical mechanics. Ship point made 26 inches only.

Regular pattern lengths, inches.....20, 22, 24, 26



No. 65—SHIP POINT

No. 65 is known and used wherever hand sawing is done. Carpenters appreciate the ease to forearm muscles rendered by the Perfection handle. Same as No. 53, except straight back. Ship point made in 26-inch length only.

Regular pattern lengths, inches.....20, 22, 24, 26

ATKINS SILVER STEEL SAWS

All saws shown on this page are made of genuine **SILVER STEEL**. They are uniformly tempered for fast, accurate cutting and "Taper Ground" for clearance in the cut. Blades are hand smithed and given Atkins Damaskeen finish. Handles are made straight across, and are of seasoned hardwood, evenly lacquered, and fastened to the blade with nickeled screws and a medallion.



No. 54—SHIP POINT

This is a good hand saw made to sell at a lower price than other **SILVER STEEL** saws. The handle is of seasoned beech. Made regular and ship point. Ship point made in 26-inch length only.

Regular pattern lengths, inches.....20, 22, 24, 26



No. 64—SHIP POINT

A time-tested saw. The full width blade is particularly adapted for all ordinary carpentry work requiring speed and accuracy. Applewood handle. Made both regular and ship point. Ship point 26-inch only.

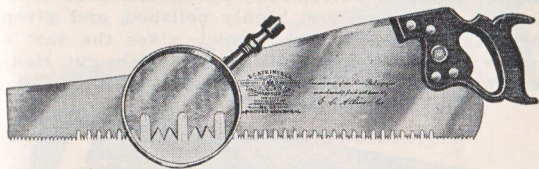
Regular pattern lengths, inches.....24, 26



No. 72—SHIP POINT

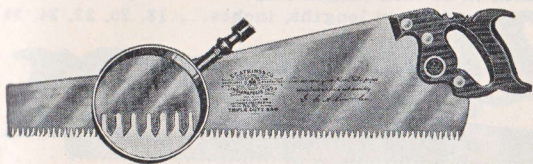
This is one of our most popular light weight hand saws and is the **original ship point pattern**. Carved applewood handle. Made only in 26-inch length, ship point.

ATKINS SPECIAL HAND, RIP AND PANEL SAWS



No. 93—IMPROVED UNIVERSAL

The special feature of this SILVER STEEL saw is its patented tooth, with extra large gullet and raker tooth. It cross cuts, mitres and rips equally well. Straight across pattern handle, fully lacquered. Made in 26-inch length only. Skew back.



No. 82—TRIPLE DUTY SAW

This is a great saw for heavy work. Cross cuts, mitres and rips equally well. Easily fitted. SILVER STEEL blade; Perfection pattern handle, highly lacquered. Made in 26-inch length only.



No. 9—HOME BUILDER SAW

The Home Builder pattern should be on every farm and in every home. The handle is of fine quality beech, fashioned to give plenty of hand room. Made in 24-inch length only. Skew back. Made of Atkins high grade special steel, fully warranted, uniformly tempered and taper ground.

ATKINS SPECIAL STEEL SAWS

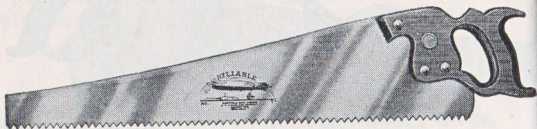
The hand saws shown below are made of Atkins high grade special steel, fully warranted. Each blade is uniformly tempered, highly polished, and given Atkins "Taper Grinding," which gives the saw a two-way taper and prevents binding in the cut. Handles are of air-dried beech, evenly lacquered.



"RELIABLE" No. 58—SHIP POINT

A guaranteed moderately priced straight back saw for general use. Ribbed edge. New style easy-grip handle. Made both regular and ship point. Ship point made in 26-inch length only.

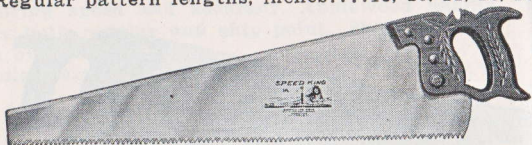
Regular pattern lengths, inches....18, 20, 22, 24, 26



"RELIABLE" No. 59—SHIP POINT

This saw is identical to the No. 58 with the exception that it is skew back instead of straight back. Ship point 26 inches only.

Regular pattern lengths, inches....18, 20, 22, 24, 26



"SPEED KING" No. 28—SHIP POINT

A special steel, moderately priced hand, rip and panel saw. Furnished filed and set ready for use. Straight back; (Ship point. Made in 26-inch length only.)

No. 29 is identical except skew back.

Regular pattern lengths, inches....18, 20, 22, 24, 26

ATKINS SPECIAL SAWS



ATKINS JUNIOR MECHANIC

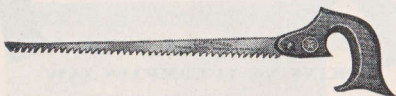
This saw is for the boy of the house. It also meets many requirements for general household and home workshop use. Made in one size only, 20 inches long, 9 points, skew and straight back. The blade is taper ground, highly polished, and made of Atkins high grade special steel. The handle is of beech, coffee stained, and has 2 nickel screws and medallion.



No. 21 METAL CUTTING HAND SAW

No. 21 Metal Cutting saw is made of SILVER STEEL. It will easily cut all ordinary sheet metal. The teeth are specially milled, straight across, but are tempered for slow filing. Seasoned hardwood handle, fully lacquered. No. 22 is identical with the exception of the handle, which is adjustable.

Lengths, inches -----18, 20, 22, 24, 26



ATKINS No. 6 KEYHOLE SAW

The finest keyhole saw made. SILVER STEEL adapts itself admirably to this class of cutting. The 10-point blade is tough, which causes it to hold its cutting edge and resist breakage.

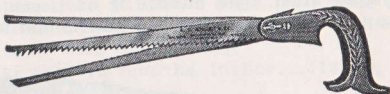
Lengths, inches.....10, 12

ATKINS SILVER STEEL SAWS



ATKINS No. 2 COMPASS SAW

This saw is unequaled for curve cutting. It is made in lengths from 10 to 16 inches. The **SILVER STEEL 8-point blade specially tempered and ground thin back for clearance.** The handle is made of carved, lacquered and polished applewood.



ATKINS No. 11 ADJUSTABLE COMPASS SAW

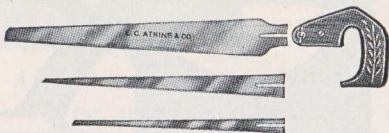
Here is a versatile compass saw. The blade is notched to fit into applewood handle that may be adjusted to cut at various angles. The No. 11 is without doubt the most useful compass saw for general use. Made in lengths from 10 to 16 inches; **8-point SILVER STEEL, thin back.**



ATKINS No. 14 COMPASS SAW

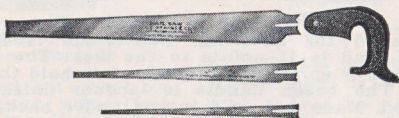
No. 14 will cut both wood and metal. Point has section of 13-point nail cutting teeth for cutting metal obstructions, balance of blade toothed 9-point compass. Interchangeable handle is finished with weather resisting lacquer. The blade is **SILVER STEEL.** Made in 12" and 14" lengths only. Ground thin back for clearance.

ATKINS SILVER STEEL SAWS



ATKINS No. 1 NEST OF SAWS

Every carpenter needs a nest of saws. The No. 1 set consists of a 12-inch keyhole blade, 14-inch compass blade, and 16-inch pruning blade, all SILVER STEEL. All three blades fit into an interchangeable handle, and are thin back. No. 2 nest has a 10-inch keyhole blade, and 12 and 16-inch compass blades, together with one interchangeable handle.



ATKINS No. 3 NEST OF SAWS

This is the ideal nest of saws. It contains an 18-inch nail-cutting blade in addition to the 12-inch keyhole blade and 14-inch compass blade. When nails or other metals are encountered you simply cut on through the metal with the nail-cutting blade, and proceed with your regular hand saw. Adjustable handle. SILVER STEEL. Thin back.

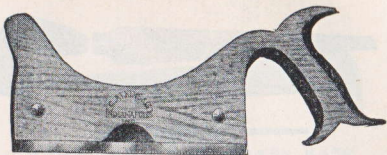


No. 3 BACK SAW

Special steel, hardened and tempered, flat ground, 8" to 14" 21 gauge, 14" to 18" 20 gauge. Polished and etched. Has a beech handle fully lacquered and polished, 3 saw screws. Filed and set. This saw is carefully made and thoroughly inspected.

Length, inches.....8, 10, 12, 14, 16, 18

ATKINS SILVER STEEL SAWS



ATKINS No. 27 STAIRBUILDERS' SAW

This SILVER STEEL saw is designed for sawing into flat surfaces where it is necessary to cut an even depth. The blade is adjustable to cut any depth desired up to $\frac{3}{4}$ ". The wood parts are of natural beech, lacquer finished. Made in 6, 8 and 10" lengths.



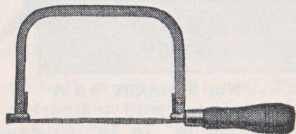
ATKINS No. 1 MITRE SAW

Unexcelled for mitering. The blade is SILVER STEEL and is 11 points to the inch. The back is extra heavy spring steel, clamped to hold the blade rigid. The beech handle is lacquer finished and polished. Made 4, 5 or 6 inches under back, 20" to 30" inches long.



ATKINS No. 100 FLOORING SAW

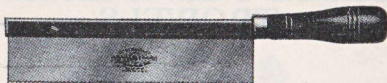
Designed to eliminate boring or chiseling when sawing into flat surfaces. The blade is toothed on both edges so that out-of-the-way spots may be reached. Made of beautifully polished SILVER STEEL in 18" length only, 10 point. Hardwood handle, highly polished.



ATKINS No. 50 COPING SAW

The ideal coping saw. The frame is $\frac{3}{8}$ " wide; $\frac{3}{16}$ " thick and made of cold rolled steel, nicked and buffed; $7\frac{1}{4}$ " x $4\frac{5}{8}$ " deep. The SILVER STEEL blade will cut at any angle. Pinned end blades $6\frac{1}{2}$ " long.

ATKINS SILVER STEEL SAWS



ATKINS No. 25 DOVETAIL SAW

Recommended for fine cabinet work where a back saw is not practical. Light but sturdy. This saw is $1\frac{5}{8}$ " under the back, 26 gauge, 15-15 $\frac{1}{2}$ points. Genuine SILVER STEEL.

ATKINS SCRAPERS AND SPECIALTIES



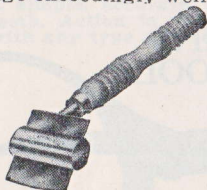
Atkins No. 4 Ramshorn Floor Scraper

Lacquered hardwood frame, easy grip. Does not chatter. Fitted with a 19 ga. 3 $\frac{1}{2}$ "x3" SILVER STEEL blade especially adapted for scraping purposes. Holds a turned edge exceedingly well.



Atkins No. 5 Scraper

Solid metal scraper, 11 inches long. Blade is held secure by thumb-screws. A center thumb-screw presses into convex form to hug the work. SILVER STEEL blade is particularly suited to scrapers. 16 ga. 2 $\frac{3}{4}$ "x2 $\frac{1}{2}$ ".



Atkins No. 3 Perfection Scraper

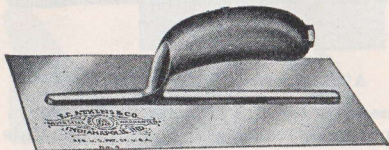
This is the most popular pattern. The blade is 16 ga. 2 $\frac{15}{16}$ "x2 $\frac{15}{16}$ " especially adapted to cut on all four sides. Made of special scraper steel to hold a turned edge. Metal parts enameled. Hardwood handle.



Atkins No. 0 Scraper Blade

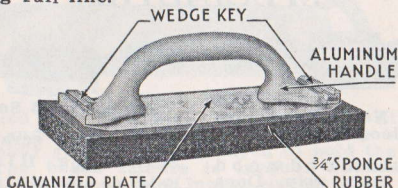
SILVER STEEL is ideally suited for all scraping purposes. All standard sizes and in 18-19 or 20 ga. Each blade is packed in wax paper package. Holds turned edge a long time.

ATKINS SILVER STEEL TROWELS



ATKINS No. 15 FEATHERWEIGHT TROWEL

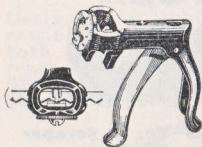
Aluminum mounting makes this trowel light. The **SILVER STEEL** blade is well balanced and holds a parallel edge. Made in 10" to 11½" lengths and 4" to 4¾" widths; thickness, 23x25 gauge. Curved handle. No. 16 is the same except that the handle is slightly tapered. Send for Atkins Trowel book showing full line.



ATKINS No. 1 MORFLOAT TROWEL

This replaces the old fashioned carpet or felt floats and is particularly adapted for sand finish work. Perfectly balanced aluminum handle. Wedge keys allow instant replacement of sponge rubber base. Made 8¼" x 3¾" x ¾" only.

ATKINS SAW TOOLS



ATKINS PISTOL GRIP SAW SET No. 432

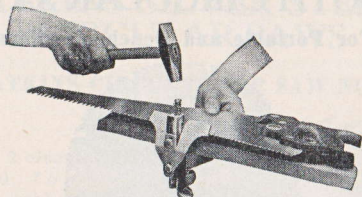
Graduated wheel shows anvil setting for 5 to 11 point saws. Saw teeth always in plain view. Plunger and anvil made of high-grade tool steel.



ATKINS No. 395 SAW SET

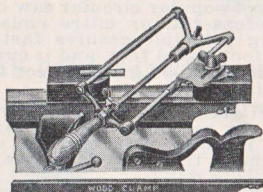
A dandy set. No. 395 revolving anvil with indicator dial. Revolving anvil gives the required bevel and length of all saw teeth from 4 to 16 to the inch. Tempered steel spring.

ATKINS SAW TOOLS



ATKINS AAA SAW SET, No. 5

The operating principle of the No. 5 hand saw set consists in regulation of set by moving the guide on the front, up or down. This not only prevents breaking of the saw teeth, but assures an absolutely uniform set, avoiding the possibility of setting the teeth too far down on the blade.



ATKINS No. 8 HAND SAW FILER

A simple, accurate tool for uniform filing of saw teeth. Action is virtually automatic. Can be used with any type of vise.

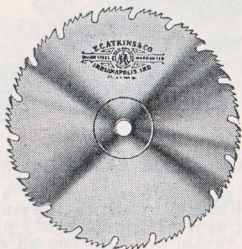


ATKINS No. 15 AAA HAND SAW JOINTER

The AAA Hand Saw Jointer for filing hand, rip and panel saws, is essential to every saw kit. Use of this tool adds to the efficiency of the saw by making the teeth uniform in length. Simple to operate.

ATKINS SILVER STEEL SOLID TOOTH CIRCULAR SAWS

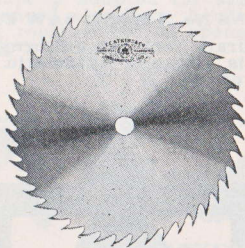
For Portable and Bench Machines.



No. 37 "DUAL GROUND"

This is the most popular circular saw on the market. It will rip, cross-cut, or mitre equally well. The Dual Grinding principle assures fast, smooth cutting up to 60 foot board feet, and it cuts so smoothly that glue joints can be made direct from the saw, without sanding.

The No. 37 SILVER STEEL Dual Ground circular saw is especially recommended for fast, high speed motor driven machines with a speed of 3600 R.P.M. Made in diameters from 5 to 20 inches.



ATKINS "HALF AND HALF"

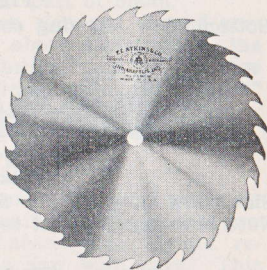
44-Tooth Saw

Here is an all-purpose SILVER STEEL circular saw recommended for places with a large variety of work; it is a combination that will rip, cross-cut or mitre. Requires very little power to operate due to scientific construction and perfect tooth shape. Made in diameters from 6 to 24 inches.

ATKINS SILVER STEEL CIRCULAR SAWS

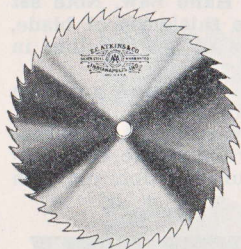
ATKINS CIRCULAR RIP SAW NO. 2

The No. 2 circular saw is designed for ripping. Flat ground; 18 gauge. Made in standard sizes for all portable bench machines. Sold filed and set ready for use. Made in 6, 7, 8 and 10-inch diameters.



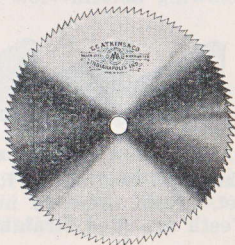
ATKINS COMBINATION SAW NO. 7

A handy circular saw for general cutting on portable and bench machines. This Atkins SILVER STEEL saw rips and crosscuts, when properly fitted. Flat ground; 18 gauge. Furnished filed and set ready for use. Made in diameters of 6, 7, 8 and 10 inches.



ATKINS CUT-OFF SAW NO. 8

No. 8 is designed for cutting across the grain. Available in all standard sizes for portable and bench machines. Hundreds of carpenters and home workshop owners find this saw invaluable in cut-off work. Furnished filed and set, ready for use, and made in 6, 7, 8 and 10-inch diameters.



DIRECTIONS

How to File and Set Hand, Rip and Panel Saws



Fig. 1

Bottom view showing correctly fitted Hand Saw.

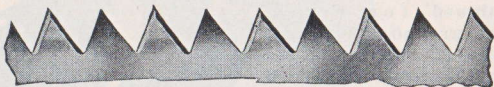


Fig. 2

Side view of properly filed and set Hand Saw. Note bevel on front of teeth.



Fig. 3

Top view of correctly fitted Hand Saw. Note set is slightly wider than entire thickness of blade, thus eliminating the chances of saw binding in the cut.

By examining the teeth of your saw you can readily tell if the teeth are uniform.

If you find the teeth are uneven, it will be necessary to "joint" and correctly shape the teeth according to the directions under "Jointing" on page 21.



Fig. 4

Showing bottom view of properly fitted Rip Saw.

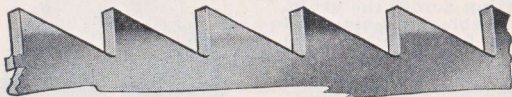


Fig. 5

Enlarged section of Rip Saw correctly filed and set. Note there is no bevel on front of teeth. Teeth are filed straight across.

Fig. 6

This shows view looking down on back of blade. You can see that the set in the Rip Saw extends slightly wider than thickest part of blade. If the teeth are of an even size and shaped correctly, as shown in the above illustration, the teeth will not require "jointing" and in this case refer to the directions under "Setting Saw Teeth" given on page 24.

JOINTING

Unevenness of teeth is caused in many ways by normal wear, cutting of nails, dropping the saw and unnecessary carelessness. You should remember to always treat a saw with care. This adds longer life.



Uneven Hand Saw Teeth



Uneven Rip Teeth

Fig. 7

Examine Fig. 7 and note how uneven the teeth are in both Cross Cut and Rip Saw. It shows the condition of some teeth before jointing. It is always good practice to use a jointing tool to hold a file square with the blade; see blade jointer and clamp in illustration No. 8 on page 22. This saw is ready for the jointing operation.

Jointing the teeth means filing the tops of the teeth to make them all level and of even height. Place the saw in the clamp as in illustration No. 8, pass the file lightly over the tops of the teeth until the file touches each tooth; joint until the shortest tooth is touched lightly. The teeth will then look like illustration No. 9.

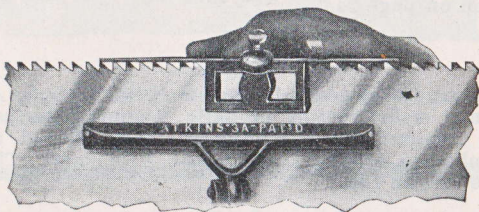
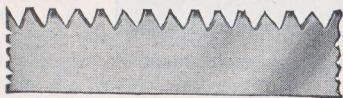


Fig. 8



Hand Jointed

Enlarged view of saw teeth jointed down evenly showing flat tops on the teeth.



Rip Jointed

Illustration of saw teeth after jointing; showing flat tops and the uneven gullets of the teeth.

Fig. 9

It is necessary that all teeth be of uniform size, shape and hook. After jointing, shape the teeth as shown in illustration No. 10. This illustration represents cross cut teeth not beveled. If you are shaping teeth for Rip Saws, see illustration No. 11 on page 23.

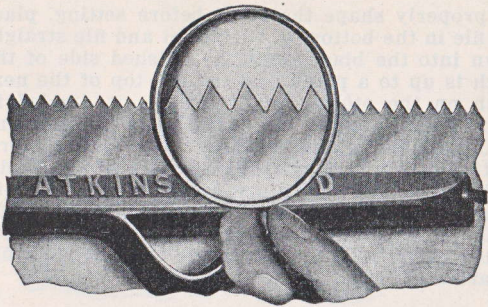


Fig. 10

Teeth not beveled for cross cutting.

The above shows an enlarged section of a Cross Cut Hand Saw with the teeth jointed and shaped properly ready for setting.

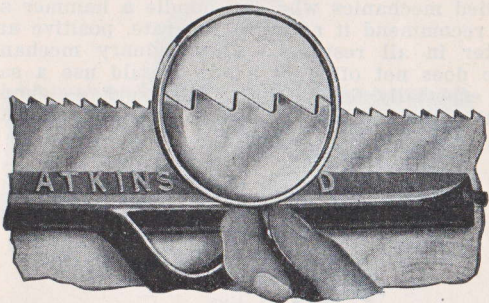


Fig. 11

Teeth shaped to a point for ripping.

This illustration shows the teeth of a Rip Saw, jointed and shaped ready for setting.

To properly shape the teeth before setting, place the file in the bottom of the gullet and file straight down into the blade until the finished side of the tooth is up to a point, and the flat top of the next tooth on the other side of the file is divided in two. Then go on to the next gullet, finishing one tooth to a point and dividing the next as before, continuing through the entire length of the blade. If the teeth in the saw are unevenly spaced as in illustration No. 9, bear in heavily against the tooth having the largest top until you reach the center of the flat top. Be sure to hold your file square and level.

SETTING SAW TEETH

Saw teeth, to clear properly, so that the saw will not bind in the wood, whether Cross Cut or Rip, should be bent outward alternately from $3/1000''$ to $5/1000''$. Saws that are straight, level and properly ground for clearance need very little set. This is to be found in ATKINS SILVER STEEL SAWS. Do not set the saw teeth too low down on the tooth. Setting should not be deeper than two-thirds the distance from the point to gullet. For skilled mechanics who can handle a hammer set we recommend it as more accurate, positive and better in all respects. The ordinary mechanic who does not often fit a saw should use a saw set especially designed for this work as shown in the illustration No. 12 of Atkins No. 395 Saw Set.

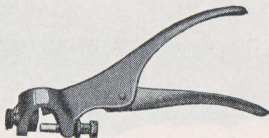


Fig. 12

ATKINS No. 395 LEVER SAW SET

Whether you use the hammer or especially designed saw set, when you have finished your saw it should look like illustration No. 13 if for cross cutting, and No. 14 if for ripping.

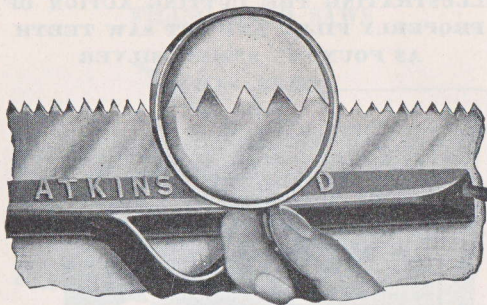


Fig. 13

The above shows Cross Cut teeth set ready to file. The teeth are even, properly shaped and set. Inspect the illustration carefully and note that the teeth are set about two-thirds the distance from point to the gullet. In general, Cross Cut Saws are tools made up of a series of "sharp knives," so arranged as to sever the fibers of the wood across the grain, as shown in illustration No. 15 on page 26.

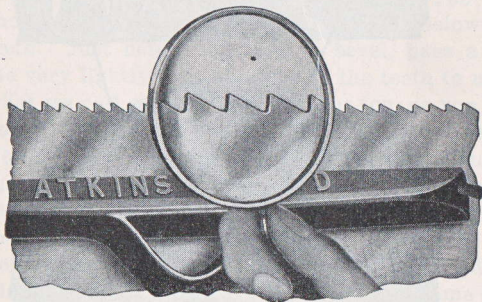


Fig. 14

This shows Rip Saw teeth ready to finish. After jointing, shaping and setting Rip Saws the pitch in rip teeth should be as shown in illustration No. 14.

With the saw teeth properly jointed and set you are now ready for finishing or pointing up and beveling.

**ILLUSTRATING THE CUTTING ACTION OF
PROPERLY FILED AND SET SAW TEETH
AS FOUND IN ATKINS SILVER
STEEL SAWS**

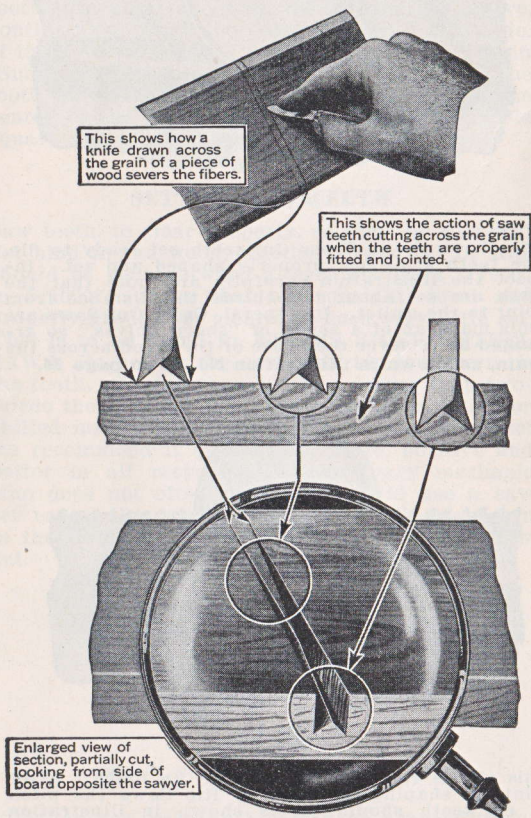


Fig. 15

FILING HAND SAWS

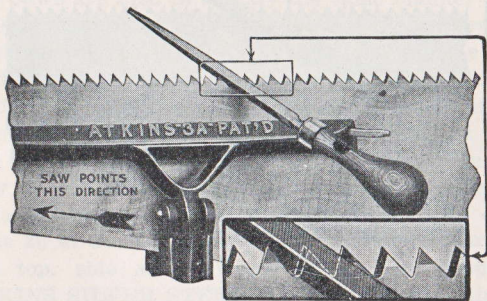


Fig. 16

The above shows a section of Cross Cut Hand Saw teeth filed properly, also the position of the file. For filing a Cross Cut Hand Saw, place the saw in a vise with the handle to the right. The vise should grip the saw from $\frac{1}{8}$ " to $\frac{1}{4}$ " below the teeth. Just before starting to bevel, pass a fine file very lightly over the tops of the teeth to make what we call a "shiner," or bright top, as you will find this useful as a guide for finishing each tooth. Your position and the position of the passing of the file should be as shown in illustration No. 16. Start in the first gullet to the LEFT of the first tooth, set away from you with your file in the position shown in illustration No. 16. Hold the file level and push it evenly and at the same time angle it across the saw, bringing each tooth to a point, possibly leaving a trifle of the "shiner" on the tooth to the right of your file. With your file in this position you can easily watch the cut of the file as you proceed with your work. Duplicate this process in EVERY OTHER gullet straight through to the handle.

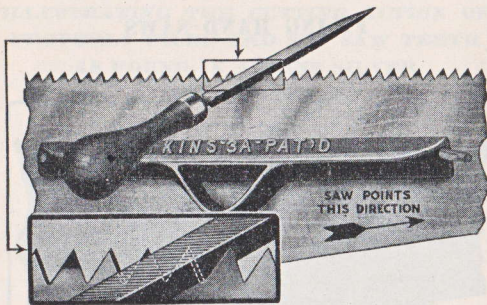


Fig. 17

Then reverse your saw in the clamp, placing the handle to the left and proceed in exactly the same manner as in the first place, except start in the first gullet to the RIGHT of the first tooth set away from you. File each tooth to a sharp point. Your position and the position of the file in this operation should be as shown in illustration No. 17.

When your saw is finished it should look like illustrations Nos. 1, 2 and 3, on page 20, showing a correctly filed Cross Cut Hand Saw, top, side and bottom views. To accomplish this result we recommend the following ATKINS SILVER STEEL FILES for various sizes of teeth:

5-5½ pt. Cross Cut Saw Teeth 6" or 7" Slim Taper File

6-7 pt. Cross Cut Saw Teeth 6" or 7" Slim Taper File

8-9 pt. Cross Cut Saw Teeth 7" Extra Slim Taper File

10-11 pt. Cross Cut Saw Teeth 4", 4½", 5" or 5½" Extra Slim Taper File

Ask your Hardware dealer for Atkins Silver Steel Files

FILING RIP SAWS

Rip Saws are filed in exactly the same manner as Cross Cut Saws are filed, except there is no bevel to the tooth of a Rip Saw. Therefore, the file is held straight across the saw at right angles to the blade and no bevel should be left on the teeth. Some filers, however, leave a slight bevel, but as Rip Saws are chisels instead of knives, as such they do not need beveling. A well filed Rip Saw should look like illustrations Nos. 4, 5 and 6 on page 20 at the beginning of the directions, showing top, side and bottom views. The proper ATKINS SILVER STEEL FILES to use for filing Rip Saws are as follows:

4 and 4½ pt. 7" Slim Taper Files

5 and 5½ pt. 7" Slim Taper Files

6 and 6½ pt. 6" or 7" Slim Taper Files

If these directions are followed carefully, there should be no reason why the youngest apprentice should have trouble in caring for his most valuable tool—the Saw. Too many fine tools are ruined every day to carelessly overlook the most minute attention to your saws.

Ask for ATKINS SILVER STEEL Files as shown on pages 30 and 31 of this "Saw Sense" book. Accept no substitute.

ATKINS SILVER STEEL FILES

BAND SAW TAPERS



There is an Atkins SILVER STEEL file for every purpose. They are made of the same high grade material as used in Atkins SILVER STEEL saws. They can therefore be depended upon to do fast, smooth filing. Look for the name ATKINS before you buy.

Atkins SILVER STEEL Band Saw Taper Files are made in three patterns: Regular, Slim and Extra Slim.

Regular Pattern files shown above, are made in all lengths from 4 to 10 inches, except 5½ inches.

Slim Pattern files are confined to 6 and 8-inch lengths.

Extra Slim Pattern Band Saw Taper files are made in 4 and 8-inch lengths only.

BAND SAW BLUNT FILES



Band Saw Blunt Files as made by Atkins are "The Finest on Earth." They will keep your saws in the best possible shape. They are adapted for fast, accurate work.

Regular Pattern Band Saw Blunt files are made in the following lengths: 4, 4½, 5, 6, 7, 8 and 10 inches.

Slim Pattern files are made only in 6 and 8-inch lengths.

Extra Slim pattern files are made in all the regular sizes from 4 to 8 inches inclusive.

ATKINS SILVER STEEL FILES

IMPROVED DIAMOND POINT



The Improved Diamond Point file furnished by E. C. Atkins and Company is adapted for such machines as the Wardwell-Foley, Black Diamond and other automatic band saw filing machines. Tests have proven that Atkins SILVER STEEL Diamond Point files will stand up better and file more material than any other brand.

Regular Pattern Improved Diamond Point files shown above are made 6 inches long and $\frac{3}{4}$ inches wide.

Slim Pattern files are made $\frac{3}{4}$ inches wide in the 6-inch length. Other lengths can be made but are not essential, as the 6-inch length fits all standard machines.

Extra Slim files in this pattern are also made in the 6-inch length, $\frac{1}{2}$ -inch face.

SPECIAL HAND SAW FILES



When experts buy files they demand the best. That is why carpenters who have used a great many files in the past are now using Atkins SILVER STEEL Hand Saw Files exclusively. They last longer and file faster.

Atkins Hand Saw Special files are available in the following lengths: 5½", 7" and 8". The 8" length is made $\frac{1}{4}$ " or $\frac{5}{16}$ " face as desired.

These files are ideal for filing all kinds of hand and small saws.

Some Valuable Information to the Everyday Carpenter

ROOF FRAMING

1. A Simple Method for Getting Lengths of Hips and Jacks for Any Pitch Roof

Draft the half of one end of building to scale with the base of the triangle equal to $\frac{1}{2}$ of the building, at one end erect a perpendicular equal to the length of common rafter, then the line joining the extremities of the legs (hypotenuse) is equal to the length of the hip for that particular building.

The jacks may be found by spacing off the building so that you have the required number of jacks. There will always be one more space than jacks. Then divide the length of the common rafter by the number of spaces and this quotient will be the length of the shortest jack. Double this for the second, treble for the third and so on.

2. Other Rules for Finding Lengths of Common Rafters

I. For one-quarter pitch roof, multiply the width of building by the decimal .56—example: 12 feet equal W X .56 equal 6.72 feet or 6 feet 9 inches.

II. For one-third pitch roof, multiply width of building by the decimal .6—example: 12 W X .6 equal 7.20 or 7 feet $2\frac{1}{2}$ inches.

III. For one-half pitch roof, multiply the width of building by the decimal .71—example: 12 W X .71 equal 8.52 or 8 feet 6 inches.

IV. For one full pitch, multiply the width of building by the decimal 1.12—example: 12 W X 1.12 equal 13.44 or 13 feet $5\frac{1}{2}$ inches.

Another Method for Finding Lengths of Rafters

Take the number of inches the roof is to rise to the foot on the tongue and one foot on the blade, which is the rise and run of one foot, then apply the square to the timber as many times as the number of feet in half the width of building. This gives you the exact length of the rafters, also the line of the tongue gives you the plumb-cut, and the line of the blade gives the seat cut.

Table for Finding the Length and Side Cuts of Jack Rafter

1. One-quarter pitch roof.
 13.5 in. shorter when spaced 12 in. on center.
 18 in. shorter when spaced 16 in. on center.
 27 in. shorter when spaced 24 in. on center.
 12 and 13.5 gives the side cuts for jacks in this pitch; the plumb-cuts and seat-cuts are the same as the common rafters for this pitch.
2. One-third pitch roof.
 14.4 in. shorter when spaced 12 in. on center.
 19.2 in. shorter when spaced 16 in. on center.
 28.8 in. shorter when spaced 24 in. on center.
 12 and 14.4 gives the side cut on jacks for this pitch.
3. One-half pitch roof.
 17 in. shorter when spaced 12 in. on center.
 22.6 in. shorter when spaced 16 in. on center.
 34 in. shorter when spaced 24 in. on center.
 12 and 17 gives the side cut on jacks for this pitch roof.

SHINGLING

To Find the Number of Shingles Required to Cover 100 Square Feet or One Square

Deduct 3 inches from length of shingle, divide the remainder by three, the result is the exposed length of shingles.

One square equals 14,400 square inches. Divide this number by the exposed surface; equals the required number of shingles.

Note—A shingle is 4 inches wide and of various lengths, as 15, 18, 21, 24, 27 inches.

Table for Estimating Shingles

Length Exposed Shingle to weather by		Sq. ft. covered by 1,000 shingles		Shingles for 100 sq. ft.	
Inches	Inches	4 in. Wide	6 in. Wide	4 in. Wide	6 in. Wide
15	4	111	167	900	600
18	5	139	208	720	480
21	6	167	250	600	400
24	7	194	291	514	343
27	8	222	333	450	300

To Find the Number of Shingles Required for a Roof

Multiply the length or ridge pole by twice the length of one rafter. This gives you the number of square feet in roof. If exposed $4\frac{1}{2}$ inches to weather, multiply square feet by nine, but if exposed 5 inches to weather, multiply square feet by eight.

Note—(a) Shingles are put up in two kinds of bundles, a 250 and a 200 bunch.

(b) 1 M shingles weigh about 250 lbs.

(c) 5 lbs. shingle nails will fasten 1 M shingles on a roof.

LATH

Lath are of two lengths, 48 inches and 32 inches. The following estimates are based on the 48-inch lathing, which are 4 feet long, $1\frac{1}{2}$ inches wide, which covers an area of 72 square inches. Obtain the number of square yards in building, which multiply by 15, the number required to cover one square yard. Eleven (11) lbs. of nails are required to put on 1,000 laths.

HOW TO FIGURE PLASTERING

Multiply the distance around the room by the height of room, then for the ceiling multiply the length of room in feet by the width of room in feet. Add the two products and divide by nine, which gives you the number of square yards.

Multiply the number of yards by the price per square yard; equals the total price.

Mixtures—Six to eight bushels of lime and 40 cubic feet sharp sand, $1\frac{1}{2}$ bushels of hair will plaster 100 square yards with two coats of mortar.

To every bushel of lime, estimate about $\frac{5}{8}$ cubic yards (17) sand for plastering. One-third barrel of stucco will hard finish 100 square yards of plastering.

Two bushels of lime will white coat 100 square yards of wall.

NUMBER OF NAILS REQUIRED IN CARPENTRY WORK

To case a door, 1 lb. of nails are required.

To case a window, 1 lb. of nails are required.

To put on rafters, joists and studding, etc., 3 lbs. to the 1,000 feet.

To lay a 6-inch pine floor, 15 lbs. to the 1,000 feet.

To find side of square that will inscribe in a given circle, multiply diameter by .7071.

To find the capacity of a square tank or cistern, multiply the number of cubic feet by $7\frac{1}{2}$ (or 7.48) and the result will be in gallons.

To find contents of cistern or tank, multiply the square of the mean diameter by the depth (all in feet) and this product by $5\frac{7}{8}$, the result will be in gallons.

One-fifth more siding and flooring is needed than the number of square feet of surface to be covered, because of the lap in the siding and matching.

To measure square timbers, multiply the length, width and thickness together and divide the product by 12.

NUMBER OF NAILS PER POUND

Size	Length and Gauge			Approx. No. to Lb.
2d	1	inch	No. 15	876
3d	$1\frac{1}{4}$	inch	No. 14	568
4d	$1\frac{1}{2}$	inch	No. $12\frac{1}{2}$	316
5d	$1\frac{3}{4}$	inch	No. $12\frac{1}{2}$	271
6d	2	inch	No. $11\frac{1}{2}$	181
7d	$2\frac{1}{4}$	inch	No. $11\frac{1}{2}$	161
8d	$2\frac{1}{2}$	inch	No. $10\frac{1}{4}$	106
9d	$2\frac{3}{4}$	inch	No. $10\frac{1}{4}$	96
10d	3	inch	No. 9	69
12d	$3\frac{1}{4}$	inch	No. 9	63
16d	$3\frac{1}{2}$	inch	No. 8	49
20d	4	inch	No. 6	31
30d	$4\frac{1}{2}$	inch	No. 5	24
40d	5	inch	No. 4	18
50d	$5\frac{1}{2}$	inch	No. 3	14
60d	6	inch	No. 2	11

Month_____

Job at_____

Contractor_____

Date		Hours	Rate	Amount	
Sun.					
Mon.					
Tues.					
Wed.					
Thur.					
Fri.					
Sat.					
Total					

**Mr. Happy Man Says—"If you had as good teeth
and temper as an ATKINS Saw, you'd
cut up more."**

CARPENTER'S TABLE OF WAGES

HOURS	Rate per Hr.	Reg. Time	Over Time	Dbl. Time	Rate per Hr.	Reg. Time	Over Time	Dbl. Time	Rate per Hr.	Reg. Time	Over Time	Dbl. Time
$\frac{1}{2}$	\$0 65	\$0 32 $\frac{1}{2}$	\$0 48 $\frac{1}{2}$	\$0 65	\$0 70	\$0 35	\$0 52 $\frac{1}{2}$	\$0 70	\$0 75	\$0 37 $\frac{1}{2}$	\$0 56 $\frac{1}{2}$	\$0 75
1	65	65	97 $\frac{1}{2}$	1 30	70	70	1 05	1 40	75	75	1 12 $\frac{1}{2}$	1 50
2	65	1 30	1 95	2 60	70	1 40	2 10	2 80	75	1 50	2 25	3 00
3	65	1 95	2 92 $\frac{1}{2}$	3 90	70	2 10	3 15	4 20	75	2 25	3 37 $\frac{1}{2}$	4 50
4	65	2 60	3 90	5 20	70	2 80	4 20	5 60	75	3 00	4 50	6 00
5	65	3 25	4 87 $\frac{1}{2}$	6 50	70	3 50	5 25	7 00	75	3 75	5 62 $\frac{1}{2}$	7 50
6	65	3 90	5 85	7 80	70	4 20	6 30	8 40	75	4 50	6 75	9 00
7	65	4 55	6 82 $\frac{1}{2}$	9 10	70	4 90	7 35	9 80	75	5 25	7 87 $\frac{1}{2}$	10 50
8	65	5 20	7 80	10 40	70	5 60	8 40	11 20	75	6 00	9 00	12 00
9	65	5 85	8 77 $\frac{1}{2}$	11 70	70	6 30	9 45	12 60	75	6 75	10 12 $\frac{1}{2}$	13 50
10	65	6 50	9 75	13 00	70	7 00	10 50	14 00	75	7 50	11 25	15 00

HOURS	Rate per Hr.	Reg. Time	Over Time	Dbl. Time	Rate per Hr.	Reg. Time	Over Time	Dbl. Time	Rate per Hr.	Reg. Time	Over Time	Dbl. Time	Rate per Hr.	Reg. Time	Over Time	Dbl. Time
$\frac{1}{2}$	\$0 85	\$0 42 $\frac{1}{2}$	\$0 63 $\frac{1}{2}$	\$0 85	\$0 90	\$0 45	\$0 67 $\frac{1}{2}$	\$0 90	\$0 95	\$0 47 $\frac{1}{2}$	\$0 71 $\frac{1}{2}$	\$0 95	\$1 00	\$0 50	\$0 75	\$1 00
1	85	85	1 27 $\frac{1}{2}$	1 70	90	90	1 35	1 80	95	95	1 42 $\frac{1}{2}$	1 90	1 00	1 00	1 50	2 00
2	85	1 70	2 55	3 40	90	1 80	2 70	3 60	95	1 90	2 85	3 80	1 00	2 00	3 00	4 00
3	85	2 55	3 82 $\frac{1}{2}$	5 10	90	2 70	4 05	5 40	95	2 85	4 27 $\frac{1}{2}$	5 70	1 00	3 00	4 50	6 00
4	85	3 40	5 10	6 80	90	3 60	5 40	7 20	95	3 80	5 70	7 60	1 00	4 00	6 00	8 00
5	85	4 25	6 37 $\frac{1}{2}$	8 50	90	4 50	6 75	9 00	95	4 75	7 12 $\frac{1}{2}$	9 50	1 00	5 00	7 50	10 00
6	85	5 10	7 65	10 20	90	5 40	8 10	10 80	95	5 70	8 55	11 40	1 00	6 00	9 00	12 00
7	85	5 95	8 92 $\frac{1}{2}$	11 90	90	6 30	9 45	12 60	95	6 65	9 97 $\frac{1}{2}$	13 30	1 00	7 00	10 50	14 00
8	85	6 80	10 20	13 60	90	7 20	10 80	14 40	95	7 60	11 40	15 20	1 00	8 00	12 00	16 00
9	85	7 65	11 47 $\frac{1}{2}$	15 30	90	8 10	12 15	16 20	95	8 55	12 82 $\frac{1}{2}$	17 10	1 00	9 00	13 50	18 00
10	85	8 50	12 75	17 00	90	9 00	13 50	18 00	95	9 50	14 25	19 00	1 00	10 00	15 00	20 00

For wage scale from \$1.05 to \$1.25 per hour, see following page

HOURS	Rate per Hr.	Reg. Time	Over Time	Dbl. Time	Rate per Hr.	Reg. Time	Over Time	Dbl. Time	Rate per Hr.	Reg. Time	Over Time	Dbl. Time	Rate per Hr.	Reg. Time	Over Time	Dbl. Time	Rate per Hr.	Reg. Time	Over Time	Dbl. Time
$\frac{1}{2}$	\$1 05	\$0 52 $\frac{1}{2}$	\$0 78 $\frac{1}{2}$	\$1 05	\$1 10	\$0 55	\$0 82 $\frac{1}{2}$	\$1 10	\$1 15	\$0 57 $\frac{1}{2}$	\$0 86 $\frac{1}{2}$	\$1 15	\$1 20	\$0 60	\$0 90	\$1 20	\$1 25	\$0 62 $\frac{1}{2}$	\$0 93 $\frac{1}{2}$	\$1 25
1	1 05	1 05	1 57 $\frac{1}{2}$	2 10	1 10	1 10	1 65	2 20	1 15	1 15	1 72 $\frac{1}{2}$	2 30	1 20	1 20	1 80	2 40	1 25	1 25	1 87 $\frac{1}{2}$	2 50
2	1 05	2 10	3 15	4 20	1 10	2 20	3 30	4 40	1 15	2 30	3 45	4 60	1 20	2 40	3 60	4 80	1 25	2 50	3 75	5 00
3	1 05	3 15	4 72 $\frac{1}{2}$	6 30	1 10	3 30	4 95	6 60	1 15	3 45	5 17 $\frac{1}{2}$	6 90	1 20	3 60	5 40	7 20	1 25	3 75	5 62 $\frac{1}{2}$	7 50
4	1 05	4 20	6 30	8 40	1 10	4 40	6 60	8 80	1 15	4 60	6 90	9 20	1 20	4 80	7 20	9 60	1 25	5 00	7 50	10 00
5	1 05	5 25	7 87 $\frac{1}{2}$	10 50	1 10	5 50	8 25	11 00	1 15	5 75	8 62 $\frac{1}{2}$	11 50	1 20	6 00	9 00	12 00	1 25	6 25	9 37 $\frac{1}{2}$	12 50
6	1 05	6 30	9 45	12 60	1 10	6 60	9 90	13 20	1 15	6 90	10 35	13 80	1 20	7 20	10 80	14 40	1 25	7 50	11 25	15 00
7	1 05	7 35	11 02 $\frac{1}{2}$	14 70	1 10	7 70	11 55	15 40	1 15	8 05	12 07 $\frac{1}{2}$	16 10	1 20	8 40	12 60	16 80	1 25	8 75	13 12 $\frac{1}{2}$	17 50
8	1 05	8 40	12 60	16 80	1 10	8 80	13 20	17 60	1 15	9 20	13 80	18 40	1 20	9 60	14 40	19 20	1 25	10 00	15 00	20 00
9	1 05	9 45	14 17 $\frac{1}{2}$	18 90	1 10	9 90	14 85	19 80	1 15	10 35	15 52 $\frac{1}{2}$	20 70	1 20	10 80	16 20	21 60	1 25	11 25	16 87 $\frac{1}{2}$	22 50
10	1 05	10 50	15 75	21 00	1 10	11 00	16 50	22 00	1 15	11 50	17 25	23 00	1 20	12 00	18 00	24 00	1 25	12 50	18 75	25 00

INSTRUCTIONS: To find the amount due you at any rate from 65c to \$1.25 per hour, find the column containing the rate you are paid and follow it down to the number of hours you have worked. Opposite is what is due you. For example: If you have worked 7½ hours at 80c per hour, 7 hours at 80c is found to be \$5.60, and ½ hour, 40c. This makes a total of \$6.00 due you for 7½ hours work at 80c per hour regular time. If you are paid regular time for 7 hours work and over time for ½ hour, 7 hours at 80c per hour, regular time, is found to be \$5.60, and ½ hour, overtime, 30c. There would then be due you \$6.20.

These tables are figured at time and one-half for over time.

E. C. ATKINS AND COMPANY

*. . . see your hardware dealer for
any of the ATKINS items listed
below:*

Back saws
Band saws, narrow
Butcher saws
Cane knives
Circular saws
Cement Trowels
Compass saws
Coping saws
Cordwood Saws
Corn knives
Crosscut saws
Ditch bank blades
Dovetail saws
Files
Flooring saws
Grass hooks
Grinding wheels
Hand saws
Hacksaw blades and frames
Jig saws
Keyhole saws
Kitchen saws
Metal cutting saws
Mitre saws
Nests of saws
Panel saws
Pattern Makers' saws
Plasterers' saws
Plastering trowels
Pruning saws and shears
Plumbers' saws
Rip saws
Saw filers
Saw sets
Scroll saws
Scrapers
Stairbuilders' saws
Wood saw frames and blades.

E. C. ATKINS and COMPANY

"The Silver Steel Saw People"

Established 1857

Home Office and Factory

INDIANAPOLIS, INDIANA, U. S. A.

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You can
SPOIL ENOUGH
MATERIAL WITH
A POOR SAW
TO BUY A
WHOLE SET OF

ATKINS SILVER
STEEL **SAWS**